

We claim:

1. A portable RFID reader for use in interrogating RFID tags associated with items of interest, comprising:

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- (a) an RFID interrogation source;
 - (b) an antenna;
 - (c) a processor;
 - (d) a display; and
 - (e) a user interface in which at least one graphic associated with the

item of interest may be presented on the display for observation by a user.

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2. The portable RFID reader of claim 1, wherein the graphic is representative of the item of interest.

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3. The portable RFID reader of claim 1, wherein the graphic is representative of an area interrogated by the RFID reader.

4. The portable RFID reader of claim 1, wherein the processor and display are components of a hand-held computer.

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5. The portable RFID reader of claim 1, wherein the display may be activated by touch.

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6. The portable RFID reader of claim 1, wherein the user interface further includes text associated with the item of interest may be presented on the display for observation by a user.

7. The portable RFID reader of claim 1, wherein the user interface further includes at least one audio signal for providing information to the user.

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8. The portable RFID reader of claim 7, wherein the audio signal is provided each time an RFID tag is interrogated.

9. The portable RFID reader of claim 7, wherein the audio signal is only provided when the RFID tag of an item meeting a predetermined criterion is interrogated.

5 10. The portable RFID reader of claim 9, wherein the predetermined criterion is selected from a group consisting of:

- (a) a specific RFID tag associated with an item of interest;
- (b) an RFID tag that is out of order relative to the RFID tag of at least one adjacent item; and
- 10 (c) a class of items to which the item of interest belongs.

11. The portable RFID reader of claim 10, wherein the criterion in response to which the audio signal is provided may be presented on the display for observation by a user.

15 12. The portable RFID reader of claim 1, wherein the user interface further includes at least one light for providing information to the user.

20 13. The portable RFID reader of claim 12, wherein at least one light is illuminated each time an RFID tag is interrogated.

25 14. The portable RFID reader of claim 12, wherein the light is only illuminated when the RFID tag of an item meeting a predetermined criterion is interrogated.

30 15. The portable RFID reader of claim 14, wherein the predetermined criterion is selected from a group consisting of:

- (a) a specific RFID tag associated with an item of interest;
- (b) an RFID tag that is out of order relative to the RFID tag of at least one adjacent item; and
- (c) a class of items to which the item of interest belongs.

16. The portable RFID reader of claim 15, wherein the criterion in response to which the at least one light is illuminated may be presented on the display for observation by a user.

5 17. A portable RFID reader for use in interrogating RFID tags associated with items of interest, comprising:

- (a) an RFID interrogation source;
- (b) an antenna;
- (c) a processor;
- 10 (d) a display; and
- (e) a user interface in which an interrogation area is shown on the display as a first graphical component of the user interface, and an item of interest is shown on the display as a second graphical component of the user interface relative to the first graphical component to indicate a location within the interrogation area.

15 18. The portable RFID reader of claim 17, wherein the first graphical component is a bar, and the second graphical component is a portion of the bar.

20 19. The portable RFID reader of claim 17, wherein the first graphical component is a group of icons, and the second graphical component is one of the icons of the series, in which the one icon is visually differentiated from the remainder of the icons.

25 20. An RFID reader comprising:

- (a) an RFID interrogation source;
- (b) a processor;
- (c) a display; and
- (d) a user interface in which a first audio signal is produced when an RFID tag is interrogated by the RFID reader, and a second audio signal different from the first signal is produced when a specific RFID tag is interrogated.

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21. The RFID reader of claim 20, wherein the first and second audio signals differ from each other in at least one of frequency, duration, and number of repetitions.

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22. An RFID reader comprising:
- (a) an RFID interrogation source;
 - (b) a processor;
 - (c) a display; and
 - (d) a user interface in which an audio signal is produced when the RFID reader interrogates an RFID tag associated with a predetermined location.
23. An RFID reader comprising:
- (a) an RFID interrogation source;
 - (b) a processor;
 - (c) a display; and
 - (d) a user interface in which an audio signal is produced repeatedly at a desired interval to pace a user as to the speed at which RFID tags should be interrogated.
24. An RFID reader comprising:
- (a) an RFID interrogation source;
 - (b) a processor;
 - (c) a display; and
 - (d) a user interface including at least one light that is illuminated when an RFID tag is interrogated.
25. The RFID reader of claim 24, wherein the light is illuminated only when an RFID tag associated with a specific material of interest is interrogated.
26. The RFID reader of claim 24, wherein at least one light remains illuminated while RFID tags are being interrogated, and at least one other light is illuminated only when an RFID tag associated with an item meeting a predetermined criterion is illuminated.

27. The RFID reader of claim 24, wherein the user interface includes more than one light, and the lights are illuminated sequentially as the RFID reader approaches a desired location or material of interest.

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28. An RFID reader comprising:

- (a) an RFID interrogation source;
- (b) a processor;
- (c) a display; and
- (d) a user interface in which the user can select an item represented

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on the display, and thereby cause the RFID reader to provide a signal when the RFID tag associated with that item has been interrogated.

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29. The RFID reader of claim 28, wherein the user interface enables a user to select more than one item represented on the display, and thereby cause the RFID reader to provide a signal when the RFID tag associated with any of the selected items has been interrogated.

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30. An RFID reader comprising:

- (a) an RFID interrogation source;
- (b) a processor;
- (c) a display; and
- (d) a user interface in which the RFID reader provides a signal to the user when the RFID reader is prepared to interrogate an RFID tag, but is unable to interrogate the tag and obtain information therefrom.

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31. An RFID reader comprising:

- (a) an RFID interrogation source;
- (b) a processor;
- (c) a display; and
- (d) a user interface that displays an indication in a measurable unit of how far away from an item or location of interest an item currently being interrogated is located.

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32. The RFID reader of claim 31, wherein the measurable unit is a number of items.

5 33. The RFID reader of claim 31, wherein the RFID reader accounts for missing intermediate items between the item or location of interest and the item currently being interrogated when the indication is displayed.

10 34. A method of using an RFID reader for interrogating RFID tags associated with items of interest, by programming the RFID reader to treat items that are not in a predetermined order as though they are in the predetermined order.

15 35. The method of claim 34, wherein the RFID reader is programmed to treat two items that are transposed relative to the predetermined order as though they are in the predetermined order.

36. The method of claim 34, wherein the RFID reader is programmed to treat an item that is separated by from two to five items from its predetermined location in the order as though it is in the predetermined location in that order.

20 37. A method of using an RFID reader for interrogating RFID tags associated with items of interest, by programming the RFID reader to provide specified information regarding each item of interest in a specified order on a user interface associated with the RFID reader, at least some of the information being selected from the group consisting of a name or title of the item, a serial or call number of the item,
25 and a desired location for the item.

30 38. A method of using an RFID reader for interrogating RFID tags associated with items of interest, by programming the RFID reader to provide specified information regarding a process performed by the RFID reader, at least some of the information being selected from the group consisting of the range of items interrogated, the percentage of items expected to have been interrogated that were not detected, and information indicative of the relative degree of orderliness to the interrogated items.